

CLAIMS

What is claimed is:

1 1. A method for providing a system of free-space electromagnetic pathways to facilitate
2 wireless networking of computing devices, each computing device having a line-of-sight
3 transceiver, the method comprising:
4 attaching a reflector to a surface of an object to create a reflective surface such that a
5 beamed communication sent from a line-of-sight transceiver at a first location is reflected in a
6 direction towards a second line-of-sight transceiver at a second location.

1 2. The method of claim 1 further comprising:

2 providing a first location within the system adjacent the reflector for a user of a first
3 computing device; and

4 providing a second location within the system adjacent the reflector for a user of a
5 second computing device.

1 3. The method of claim 1, wherein the reflector is a first reflector, further comprising:

2 attaching a second reflector to a surface of a second object to create a reflective
3 surface such that the beamed communication received by the second transceiver and
4 subsequently re-transmitted is reflected in a direction towards a third line-of-sight transceiver
5 at a third location.

1 4. The method of claim 3 further comprising:

2 providing a third location within the system adjacent the second reflector for a user of
3 a computing device.

1 5. The method of claim 1 wherein the step of attaching further comprises

- 2 attaching the reflector so that it has a curvature that disperses the beamed
3 communication such that the second line-of-sight transceiver and a third the line-of-sight
4 transceiver can receive the beamed communication.
- 1 6. The method of claim 5 further comprising transmitting the beamed communication using
2 multicast packets.
- 1 7. The method of claim 5 further comprising transmitting the beamed communication in
2 accordance to a multi-hop protocol.
- 1 8. The method of claim 1 further comprising providing the reflector that conforms to a
2 curvature of the surface of the object.
- 1 9. The method of claim 1 further comprising providing the reflector shaped to produce a
2 predefined curvature on the surface of the object.
- 1 10. The method of claim 9 wherein the step of providing the reflector further comprises
2 providing the reflector with the predefined curvature being arcuate.
- 1 11. The method of claim 1 further comprising transmitting the beamed communication using
2 light with an infrared wavelength.
- 1 12. The method of claim 1 further comprising using the computing device that is a personal
2 digital assistant.
- 1 13. The method of claim 1 wherein the attaching step further comprises attaching the
2 reflector to a chair.
- 1 14. A system of free-space electromagnetic pathways for facilitating wireless networking of a
2 plurality computing devices, each computing device having a transceiver for beamed line-of-
3 sight, electromagnetic communication, the communication channel comprising:
4 a first location at which one of the plurality of computing devices is used;

5 a second location at which another of the plurality of computing devices is used; and
6 a reflective surface purposely disposed adjacent the first and second locations such
7 that a beamed communication transmitted from the first location is reflected in a direction
8 towards the second location.

1 15. The system of claim 14 further comprising:

2 a third location at which another of the plurality of computing devices is used; and
3 a reflective surface purposely disposed adjacent the second and third locations such
4 that the beamed communication received at and re-transmitted from the second location is
5 reflected in a direction towards the third location.

1 16. The system of claim 15 wherein the beamed communication includes a multicast packet.

1 17. The system of claim 15 wherein the beamed communication traverses the network in
2 accordance to a multi-hop protocol.

1 18. The system of claim 14 wherein the reflective surface has a curvature that disperses the
2 beamed communication such that the beamed communication transmitted from the first
3 location is received at the second location and the third location.

1 19. The system of claim 14 wherein the reflective surface conforms to a curvature of a
2 surface of an object to which the reflective surface is attached.

1 20. The system of claim 14 wherein the reflective surface is shaped to produce a predefined
2 curvature on a surface of an object to which the reflective surface is attached.

1 21. The system of claim 20 wherein the predefined curvature of the reflector is arcuate.

1 22. The system of claim 14 wherein the object is a chair.

1 23. The system of claim 14 wherein the beamed communication uses light with an infrared
2 wavelength.

1 24. The system of claim 14 wherein the beamed communication uses microwaves.

1 25. The system of claim 14 wherein the computing devices are personal digital assistants.

1 26. A wireless network of line-of-sight computing devices, the network comprising:

2 a first computing device having a line-of-sight transceiver;

3 a second computing device having a line-of-sight transceiver; and

4 a reflector attached to a surface of an object adjacent the first and second computing
5 devices such that a beamed communication sent from the transceiver of the first computing
6 device is reflected in a direction towards the transceiver of the second computing device.

1 27. The wireless network of claim 26 further comprising:

2 a third computing device having a line-of-sight transceiver; and

3 a second reflector attached to a surface of a second object adjacent the second
4 computing device such that the beamed communication received by the second computing
5 device and subsequently re-transmitted by the second computing device is reflected in a
6 direction towards the transceiver of the third computing device.

1 28. The wireless network of claim 27 wherein the beamed communication includes a
2 multicast packet.

1 29. The wireless network of claim 27 wherein the beamed communication traverses the
2 wireless network in accordance to a multi-hop protocol.

1 30. The wireless network of claim 26 wherein the reflector has a curvature that disperses the
2 beamed communication such that the transceiver of the second computing device and the
3 transceiver of a third computing device can receive the beamed communication.

1 31. The wireless network of claim 26 wherein the reflector conforms to a curvature of the
2 surface of the object.

1 32. The wireless network of claim 26 wherein the reflector is shaped to produce a predefined
2 curvature on the surface of the object.

1 33. The wireless network of claim 32 wherein the predefined curvature of the reflector is
2 arcuate.

1 34. The wireless network of claim 26 wherein the beamed communication uses light with an
2 infrared wavelength.

1 35. The wireless network of claim 26 wherein the computing devices are personal digital
2 assistants.

1 36. The wireless network of claim 26 wherein the object is a chair.

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